

Application No.: 10/700,785

Docket No.: JCLA11670-R

In The Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) An integrated audio/video sensor, comprising:

a substrate;

an image-receiving module for sensing an image;

a sound-receiving module with a cavity, for sensing a sound, disposed on the substrate, wherein the image-receiving module is disposed on the sound-receiving module and comprises an outer cavity casing with a membrane thereon, a fixed inner cavity casing, and an electrical insulator between the outer cavity casing and the fixed inner cavity casing; and

a signal-transforming module, disposed on the substrate and accommodated in the cavity, for transforming the received image and the received sound into an audio/video signal which comprises a video signal component and an audio signal component;

wherein the signal-transforming module comprises an image-sensing chip for detecting the image and outputting the audio/video signal, an audio amplifier chip for detecting the sound, amplifying the sound detected and outputting the audio/video signal, and an audio/video processing chip for carrying out a post-processing of the audio/video signal.

2. (previously presented) The integrated audio/video sensor of claim 1, wherein the signal-transforming module further comprises:

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a peripheral circuit chip.

3. (original) The integrated audio/video sensor of claim 2, wherein the image-sensing chip comprises a complementary metal-oxide-semiconductor (CMOS) image-sensing module or a charged coupled device (CCD).

4. (original) The integrated audio/video sensor of claim 1, wherein the signal-transforming module is fabricated by a multi-chip module (MCM) method or a system on a chip (SOC) method.

5. (original) The integrated audio/video sensor of claim 1, wherein the signal-transforming module transforms the received image and the received sound synchronously.

Claim 6. (canceled)

7. (currently amended) The integrated audio/video sensor of claim 1, wherein the sound-receiving module ~~comprises~~ is a condenser microphone.

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8. (currently amended) An integrated audio/video signal processing system, comprising:

an integrated audio/video sensor, comprising:

a substrate;

a sound-receiving module with a cavity, for sensing a sound, disposed on the substrate, wherein the image-receiving module is disposed on the sound-receiving module and comprises an outer cavity casing with a membrane thereon, a fixed inner cavity casing, and an electrical insulator between the outer cavity casing and the fixed inner cavity casing; and

a signal-transforming module, disposed on the substrate and accommodated in the cavity,
for transforming the received image and the received sound into an audio/video signal, wherein the signal-transforming module comprises an image-sensing chip for detecting the image and outputting the audio/video signal, an audio amplifier chip for detecting the sound, amplifying the sound detected and outputting the audio/video signal, and an audio/video processing chip for carrying out a post-processing of the audio/video signal; and

an audio/video system for post-processing the audio/video signal.

9. (previously presented) The integrated audio/video signal processing system of claim 8, wherein the signal-transforming module further comprises:

a peripheral circuit chip.

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10. (original) The integrated audio/video signal processing system of claim 9, wherein the image-sensing chip further comprises a complementary metal-oxide-semiconductor (CMOS) image-sensing module or a charged coupled device (CCD).

11. (original) The integrated audio/video signal processing system of claim 8, wherein the signal-transforming module is fabricated using either a multi-chip module (MCM) method or a system on a chip (SOC) method.

12. (original) The integrated audio/video signal processing system of claim 8, wherein the signal-transforming module transforms the received image and the received sound synchronously.

13. (original) The integrated audio/video signal processing system of claim 8, wherein the audio/video signal comprises a video signal component and an audio signal component.

14. (currently amended) The integrated audio/video signal processing system of claim 8, wherein the sound-receiving module comprises is a condenser microphone.

15. (previously presented) The integrated audio/video sensor of claim 1, wherein the image-receiving module comprises a holder and a lens installed in an end of the holder, and the

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sound-receiving module and the signal-transforming module are installed in an opposite end of the holder.

16. (currently amended) The integrated audio/video sensor of claim 15, wherein the cavity is an air cavity ~~the sound-receiving module comprises an air cavity, and the signal-transforming module is accommodated in the air cavity.~~

17. (previously presented) The integrated audio/video signal processing system of claim 8, wherein the image-receiving module comprises a holder and a lens installed in an end of the holder, and the sound-receiving module and the signal-transforming module are installed in an opposite end of the holder.

18. (currently amended) The integrated audio/video signal processing system of claim 17, wherein the cavity is an air cavity ~~the sound-receiving module comprises an air cavity, and the signal-transforming module is accommodated in the air cavity.~~